

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF TEXAS  
DALLAS DIVISION**

SAMSUNG DISPLAY CO., LTD.,

Plaintiff,

v.

WUHAN CHINA STAR OPTOELECTRONICS  
SEMICONDUCTOR DISPLAY TECHNOLOGY  
CO., LTD.; TCL CHINA STAR  
OPTOELECTRONICS TECHNOLOGY CO.,  
LTD.; ULTIMATE ESHOP, LLC, D/B/A  
PARTS4REPAIR; AND ETECH PARTS PLUS,  
LLC

Defendants.

Civil Action No. 3:25-cv-01430  
JURY TRIAL DEMANDED

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Samsung Display Co., Ltd. (“Samsung Display” or “Plaintiff”), files this Complaint and demand for a jury trial seeking relief for patent infringement by Wuhan China Star Optoelectronics Semiconductor Display Technology Co., Ltd.; TCL China Star Optoelectronics Technology Co., Ltd.; Ultimate Eshop, LLC, d/b/a Parts4Repair; and eTech Parts Plus, LLC (collectively, “Defendants”) of U.S. Patent No. 11,594,578 (“the ’578 Patent”), U.S. Patent No. 7,414,599 (“the ’599 Patent”), and U.S. Patent No. 9,330,593 (“the ’593 Patent”) (collectively, the “Asserted Patents”). Samsung Display states and alleges the following:

**NATURE OF ACTION**

1. This is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, specifically including 35 U.S.C. § 271.

**THE PARTIES**

2. Plaintiff Samsung Display is a corporation organized and existing under the laws of the Republic of Korea, with its principal place of business at 1, Samsung-ro, Giheung-gu, Yongin-si, Gyeonggi-do, 17113, Republic of Korea. Samsung Display is a market leader in the research, development, and manufacture of organic light emitting diode (“OLED”) displays.

3. Upon information and belief, TCL China Star Optoelectronics Technology Co., Ltd. (“TCL CSOT”) is a display company organized under the laws of the People’s Republic of China having a regular and established place of business at No. 9-2 Tangming Ave., Guangming New District, Shenzhen, Guangdong, 518132, China. TCL China Star Optoelectronics Technology Co., Ltd. is a majority shareholder of Wuhan China Star Optoelectronics Semiconductor Display Technology Co., Ltd. (“Wuhan China Star”), a display company organized under the laws of the People’s Republic of China having a regular and established place of business at Room 305, Building C5, Optics Valley Biological Innovation Park, No. 666, Gaoxin Ave., Donghu New Technology Development Zone Wuhan, Hubei, 430077, China. References herein to “Wuhan CSOT” without a further modifier include both TCL CSOT and Wuhan China Star.

4. Upon information and belief, Ultimate Eshop, LLC, d/b/a Parts4Repair (“Ultimate Eshop”) is a company existing under the laws of Texas with its principal place of business at 115 Bristol Ct., Coppell, TX 75019.

5. Upon information and belief, eTech Parts Plus, LLC (“eTech Parts Plus”) is a company existing under the laws of Texas with its principal place of business at 651 Industrial Blvd., Grapevine, TX 76051.

**JURISDICTION AND VENUE**

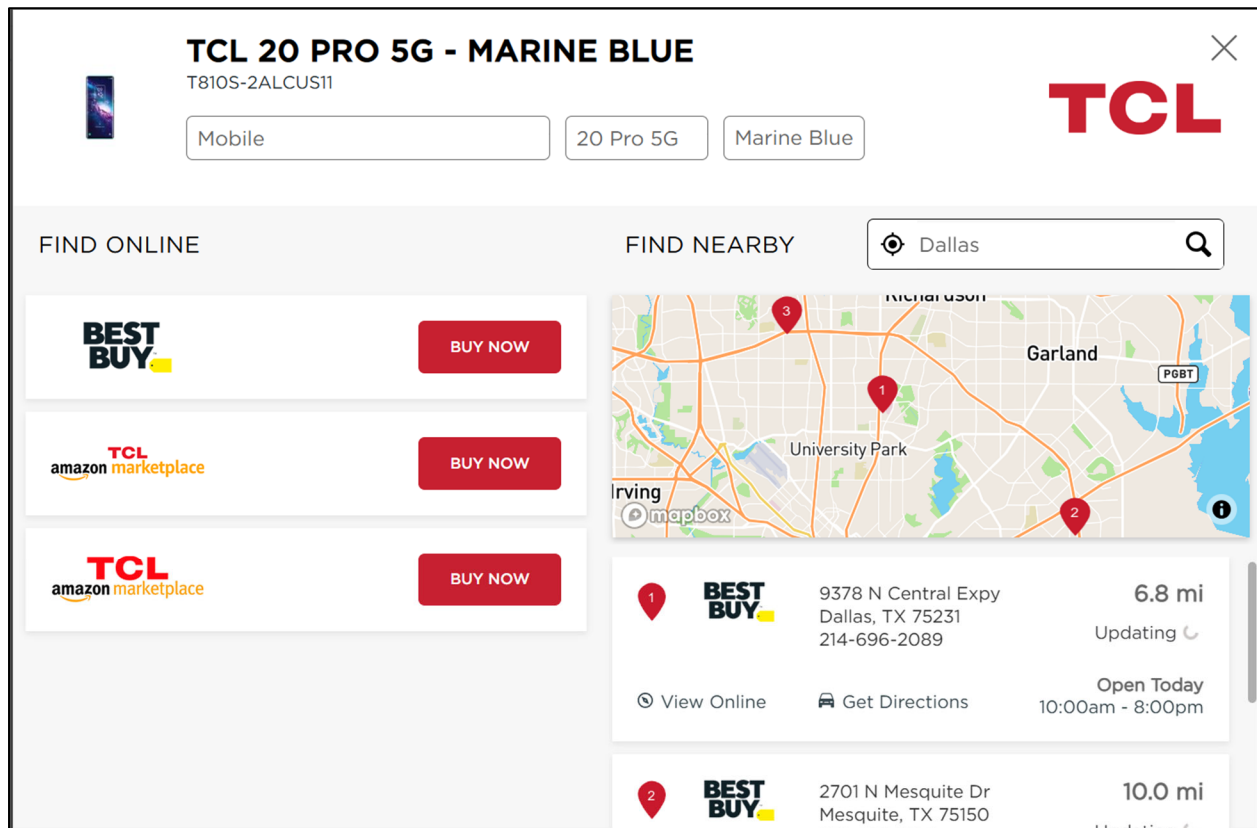
6. This action arises under the patent laws of the United States, Title 35 U.S.C. § 1, *et seq.* This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

7. This Court has personal jurisdiction over Defendants. On information and belief, each of Defendants, directly or indirectly through intermediaries (including distributors, retailers, and others), ships, distributes, offers for sale, sells, and advertises products in the United States, the State of Texas, and this District. Defendants have purposefully sold infringing products with the expectation that they will be purchased by consumers in this District. On information and belief, these infringing products have been and continue to be purchased by consumers in this District. Defendants have committed acts of patent infringement within the United States, and more particularly within this District.

8. Wuhan CSOT has established minimum contacts with the United States as a whole and with Texas such that subjecting Wuhan CSOT to personal jurisdiction in this Court will not offend traditional notions of fair play and substantial justice. Wuhan CSOT has purposely availed itself of the laws and protections of the United States and the State of Texas by knowingly supplying and/or contracting to supply OLED displays including (i) for product repair and as replacement parts to be sold, offered for sale, imported into, and used in the United States, the State of Texas, and in this District, and (ii) for incorporation into products (such as smartphones) to be sold, offered for sale, imported into, and used in the United States, the State of Texas, and in this District. Wuhan CSOT has targeted the United States by conducting regular business therein, and has placed and continues to place its OLED display products into the stream of commerce through an established distribution channel with the expectation and/or knowledge that they will be purchased by consumers in the United States, the State of Texas, and this District. Samsung

Display's claims for patent infringement arise directly from and/or relate to this activity. Moreover, discussed further below are OLED display products from Defendants Ultimate Eshop and eTech Parts Plus (Texas entities located within this District) which, on information and belief, contain OLED displays supplied by Wuhan CSOT.

9. On information and belief, Wuhan CSOT supplies infringing OLED displays to customers who target the U.S. market and Texas, including TCL Technology Group Corporation and/or its affiliates and subsidiaries ("TCL"), which markets and sells smartphones such as the TCL 10 Pro, TCL 20 Pro 5G, and TCL 30 5G smartphones to customers located in Texas that, on information and belief, contain infringing OLED displays supplied by Wuhan CSOT. *See, e.g.*, <https://www.tcl.com/us/en/products/mobile/10-series/tcl-10-pro-grey>; <https://www.tcl.com/us/en/products/mobile/20-series/20-pro-5g-grey-moon dust-gray>; <https://www.tcl.com/us/en/products/mobile/tcl-30-series/tcl-30-5g-dreamy-blue>).



10. On information and belief, Wuhan CSOT also supplies infringing OLED displays to Defendants Ultimate Eshop and eTech Parts Plus, which market and sell replacement OLED displays such as the “TCL 20 Pro 5G LCD Screen Digitizer Assembly” (SKU: MBRPTL015) (Ultimate Eshop) and “Platinum Soft OLED Screen Assembly” (SKU: 822-9401) (eTech Parts Plus) to customers in the United States, including in the State of Texas. Ultimate Eshop markets the “TCL 20 Pro 5G LCD Screen Digitizer Assembly” as “an original and brand new and ready-to-install screen assembly for TCL 20 Pro 5G.” *See* <https://tinyurl.com/y3ewpx8w> (“Display Type: AMOLED”). eTech Parts Plus markets the “Platinum Soft OLED Screen Assembly” as “used to replace a non-responsive OLED.” *See* <https://tinyurl.com/5n7bff74>.

11. On information and belief, Wuhan CSOT induces TCL to include its infringing OLED displays in smartphones sold by TCL with the knowledge that they will be sold in the U.S., including in Texas. Wuhan CSOT has thereby placed and continues to place infringing OLED displays into the stream of commerce knowing that many of its products will end up in Texas.

12. On information and belief, Ultimate Eshop maintains continuous and systematic contacts with Texas including maintaining a corporate office at 115 Bristol Ct., Coppell, Texas. *See* <https://www.parts4repair.com/contact-us/>.

13. On information and belief, eTech Parts Plus maintains continuous and systematic contacts with Texas including maintaining a corporate office at 651 Industrial Blvd., Grapevine, Texas. *See* <https://www.etechparts.com/contact/>.

14. Thus, on information and belief, Defendants’ presence and activities in this District, including patent infringement as described below, give rise to the claims set forth herein.

15. Venue is proper in this District under 28 U.S.C. §§ 1391(a)-(d) and 1400(b). Defendants TCL CSOT and Wuhan China Star are foreign corporations that do not reside in the

United States, and may be sued in any judicial district pursuant to 28 U.S.C. § 1391(c)(3). Venue is proper in this District as to Defendants Ultimate Eshop and eTech Parts Plus because they reside in and are corporate citizens of this District and have committed and continue to commit acts of infringement in this District giving rise to this Action.

16. Defendants are jointly and severally liable for infringing one or more claims of the Asserted Patents, insofar as acts of infringement by Defendants stem from the same transactions or occurrences regarding the use, sale, and/or offer for sale in the United States and/or the importation into the United States of the Accused Products. Consequently, this action involves questions of law and fact common to all Defendants.

#### **THE ASSERTED PATENTS**

17. U.S. Patent No. 11,594,578 (“the ’578 Patent”) is entitled “Pixel Arrangement Structure for Organic Light Emitting Display Device.” The ’578 Patent discloses, *inter alia*, novel pixel arrangement structures for an OLED display where the pixels are arranged according to novel patterns and layouts in which the pixels are formed in specified locations, formed to have differing surface areas, separated from each other by defined lengths, and/or formed to have particular shapes. A true and correct copy of the ’578 Patent is attached to this Complaint as Exhibit A.

18. Samsung Display is the sole owner by assignment of all right, title, and interest in the ’578 Patent.

19. U.S. Patent No. 7,414,599 (“the ’599 Patent”) is entitled “Organic Light Emitting Device Pixel Circuit and Driving Method Thereof.” The ’599 Patent discloses, *inter alia*, a novel pixel circuit for realizing high gradation in an organic light emitting device (OLED), thereby improving the device’s image quality. A true and correct copy of the ’599 Patent is attached as Exhibit B.

20. Samsung Display is the sole owner by assignment of all right, title, and interest in the '599 Patent.

21. U.S. Patent No. 9,330,593 ("the '593 Patent") is entitled "Stage Circuit and Organic Light Emitting Display Using the Same." The '593 Patent discloses, inter alia, novel staging circuits for applying scanning signals to an OLED display. A true and correct copy of the '593 Patent is attached as Exhibit C.

22. Samsung Display is the sole owner by assignment of all right, title, and interest in the '593 Patent.

23. On July 6, 2022, Samsung Display sent a letter to Defendant TCL CSOT notifying it that OLED displays being made and offered for sale by TCL CSOT were infringing Samsung Display's patents including the '599 Patent and the '593 Patent. Defendant TCL CSOT is a majority shareholder of Defendant Wuhan China Star. Upon information and belief, Defendants TCL CSOT and Wuhan China Star have therefore had knowledge of the '599 Patent and the '593 Patent and of their infringement of those patents, at least since receiving the July 6, 2022 letter. In addition, upon information and belief, Defendants TCL CSOT and Wuhan China Star have had knowledge of the '578 Patent and of their infringement of the '578 Patent since at least the date of issuance of that patent. The '578 Patent issued from an application that was a continuation of applications that issued as U.S. Patent No. 9,818,803 ("the '803 Patent") and U.S. Patent No. 10,854,683 ("the '683 Patent"), which were identified in Samsung Display's July 6, 2022 letter to Defendant TCL CSOT as being infringed by OLED displays being made and offered for sale by TCL CSOT.

24. Moreover, Samsung Display marks the Asserted Patents on its website (<https://www.samsungdisplay.com/eng/patents.jsp>). Defendants have copied Samsung Display's

patented OLED technologies, and have had knowledge of the Asserted Patents through their copying of Samsung Display's patented OLED technologies.

25. Upon information and belief, Defendants TCL CSOT and Wuhan China Star additionally have had knowledge of the '599 Patent and the '593 Patent and of their infringement of those patents, at least since the filing of a complaint in the United States International Trade Commission asserting infringement of those patents by the named Respondents, including Defendant eTech Parts Plus. *See In the Matter of Certain Active Matrix Organic Light-Emitting Diode Display Panels and Modules for Mobile Devices, and Components Thereof*, ITC Inv. No. 337-TA-1351 (the "-1351 Proceeding"). On February 28, 2023, TCL CSOT communicated to Samsung Display its intent to file a motion to intervene as a respondent the -1351 Proceeding, on the basis that it believed certain Respondents had sold in the United States, or imported into the United States, replacement OLED displays manufactured by TCL CSOT that were within the scope of the International Trade Commission's Investigation. Thus, upon information and belief, Defendants TCL CSOT and Wuhan China Star have had knowledge of the '599 Patent and the '593 Patent and of their infringement of those patents, at least since the filing of the complaint in the -1351 Proceeding, and at least as of the date TCL CSOT notified Samsung Display of its intent to intervene in that proceeding. Further, upon information and belief, Defendant eTech Parts Plus has had knowledge of the '599 Patent and the '593 Patent and of its infringement of those patents, at least since the filing of the complaint in the -1351 Proceeding, and at least as of the date it was served with that complaint.

26. The complaint in the -1351 Proceeding further alleged infringement of the '803 Patent and the '683 Patent, and on the same day that TCL CSOT communicated to Samsung Display its intent to file a motion to intervene as a respondent in the -1351 Proceeding, the '578



Patent issued. Thus, upon information and belief, Defendants TCL CSOT and Wuhan China Star have had knowledge of the '578 Patent and their infringement of the '578 Patent at least since the date of issuance of the '578 Patent.

27. Moreover, on March 10, 2023, Samsung Display moved to amend the complaint in the -1351 Proceeding to assert infringement of the '578 Patent by the Respondents, including Defendant eTech Parts Plus, and a public version of this motion was filed on March 14, 2023. Upon information and belief, Defendants TCL CSOT and Wuhan China Star have had knowledge of the '578 Patent and of their infringement of the '578 Patent, at least as of March 14, 2023. Further, upon information and belief, Defendant eTech Parts Plus has had knowledge of the '578 Patent and of its infringement of that patent, at least as of March 10, 2023.

28. The initial determination in the -1351 Proceeding found all asserted claims of the '578 Patent, the '599 Patent, and the '593 Patent valid, and further found that certain named Respondents, including Defendant eTech Parts Plus, infringe the '578 Patent, the '599 Patent, and the '593 Patent. The International Trade Commission did not review, and thus affirmed, these findings. Despite these infringement findings, Defendants continue to commit acts of infringement.

29. In addition, on June 9, 2023, Defendant Wuhan China Star filed a petition for *inter partes* review seeking to challenge the patentability of the claims of the '599 Patent before the Patent Trial and Appeal Board. *See Mianyang BOE Optoelectronics Tech. Co., Ltd. et al. v. Samsung Display Co., Ltd.*, Case No. IPR2023-00941 (PTAB). On June 21, 2023, Defendant Wuhan China Star filed a petition for *inter partes* review seeking to challenge the patentability of certain claims of the '578 Patent before the Patent Trial and Appeal Board. *See Mianyang BOE Optoelectronics Tech. Co., Ltd. et al. v. Samsung Display Co., Ltd.*, Case No. IPR2023-01075

(PTAB). And on March 6, 2024, after having previously terminated an *inter partes* review petition it had filed on the '593 Patent,<sup>1</sup> Defendant Wuhan China Star filed a second petition for *inter partes* review seeking to challenge the patentability of certain claims of the '593 Patent before the Patent Trial and Appeal Board. *See Mianyang BOE Optoelectronics Tech. Co., Ltd. et al. v. Samsung Display Co., Ltd.*, Case No. IPR2024-00620 (PTAB).

30. On December 6, 2024, the Patent Trial and Appeal Board issued a Final Written Decision upholding the validity of all challenged claims of the '599 Patent.

31. On January 6, 2025, the Patent Trial and Appeal Board issued a Final Written Decision upholding the validity of all challenged claims of the '578 Patent.

32. Despite the determinations by the Patent Trial and Appeal Board, Defendants continue to commit acts of infringement with respect to the '599 Patent and the '578 Patent.

33. Further, Defendants have had knowledge of the Asserted Patents and of their infringement of the Asserted Patents at least since the filing of this Complaint.

### **THE ACCUSED PRODUCTS**

34. The Accused Products are OLED displays made, used, sold, offered for sale, or imported by Wuhan CSOT, including for example the “TCL 20 Pro 5G LCD Screen Digitizer Assembly” and “Platinum Soft OLED Screen Assembly” products.

35. Upon information and belief, Wuhan CSOT, directly or indirectly through affiliates, subsidiaries, agents or other representatives, sells and/or offers for sale Accused Products

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<sup>1</sup> On July 26, 2023, Defendant Wuhan China Star filed a first petition for *inter partes* review seeking to challenge the patentability of certain claims of the '593 Patent before the Patent Trial and Appeal Board. *See Mianyang BOE Optoelectronics Tech. Co., Ltd. et al. v. Samsung Display Co., Ltd.*, Case No. IPR2023-01221 (PTAB). On November 8, 2023, Wuhan China Star moved to dismiss and terminate the proceeding, and the Patent Trial and Appeal Board granted the motion on November 27, 2023.

in the United States, and/or imports Accused Products into the United States, including in connection with supplying and selling Accused Products to U.S. businesses, such as Ultimate Eshop and eTech Parts Plus, for resale as replacement parts and in connection with supplying and selling Accused Products to companies such as TCL for testing, evaluation, qualification, and incorporation into consumer electronics products, such as smartphones and tablets, that are used, sold, and/or offered for sale in the United States and/or imported into the United States.

36. Upon information and belief, certain of the Accused Products are and have been incorporated into smartphones sold by TCL in the United States, including at least the TCL 10 Pro, TCL 20 Pro 5G, TCL 30, TCL 30 5G, and TCL 30+ smart phones. *See, e.g.*, <https://www.tcl.com/us/en/products/mobile/10-series/tcl-10-pro-grey>; <https://www.tcl.com/us/en/products/mobile/20-series/20-pro-5g-grey-moondust-gray>; <https://www.tcl.com/us/en/products/mobile/tcl-30-series/tcl-30-5g-dreamy-blue>; [https://www.gsmarena.com/tcl\\_20\\_pro\\_5g\\_announced\\_with\\_curved\\_oled\\_20l\\_and\\_20l\\_tag\\_along-news-48653.php](https://www.gsmarena.com/tcl_20_pro_5g_announced_with_curved_oled_20l_and_20l_tag_along-news-48653.php); <https://www.gizchina.com/2021/06/29/tcl-20-pro-5g-tcl-20s-and-20e-are-heading-to-the-us/>; <https://www.devicespecifications.com/en/news/b4a2121d>.

37. Upon information and belief, Wuhan CSOT has also imported OLED display products into the United States, and used them in the United States, to promote them at industry and trade shows. For example, upon information and belief, Wuhan CSOT imported OLED display products into the United States for exhibition at the Society for Information Display's ("SID") DisplayWeek events in at least 2022, 2023, and 2024.

38. Upon information and belief, Defendants Ultimate Eshop and eTech Parts Plus sell, offer for sale, and/or import into the United States certain of the Accused Products as replacement parts.

**COUNT I – INFRINGEMENT OF U.S. PATENT NO. 11,594,578**

39. Samsung Display incorporates by reference the allegations of Paragraphs 1 through 38 as if fully set forth herein.

40. Upon information and belief, Defendants have infringed and continue to directly infringe the '578 Patent by making, using, selling, offering for sale in, and/or importing into the United States OLED displays for incorporation into the Accused Products.

41. Upon information and belief, Defendants have directly infringed multiple claims of the '578 Patent, including independent claim 1, by making, using, selling, offering for sale, and/or importing into the United States the Accused Products in violation of 35 U.S.C. § 271(a). Charts providing exemplary evidence of infringement of the '578 Patent are attached to this Complaint as Exhibits D and E. By way of example only, the “TCL 20 Pro 5G LCD Screen Digitizer Assembly” product infringes an exemplary claim of the '578 Patent, as shown in Exhibit D. Additionally, by way of example only, the “Platinum Soft OLED Screen Assembly” product infringes an exemplary claim of the '578 Patent, as shown in Exhibit E.

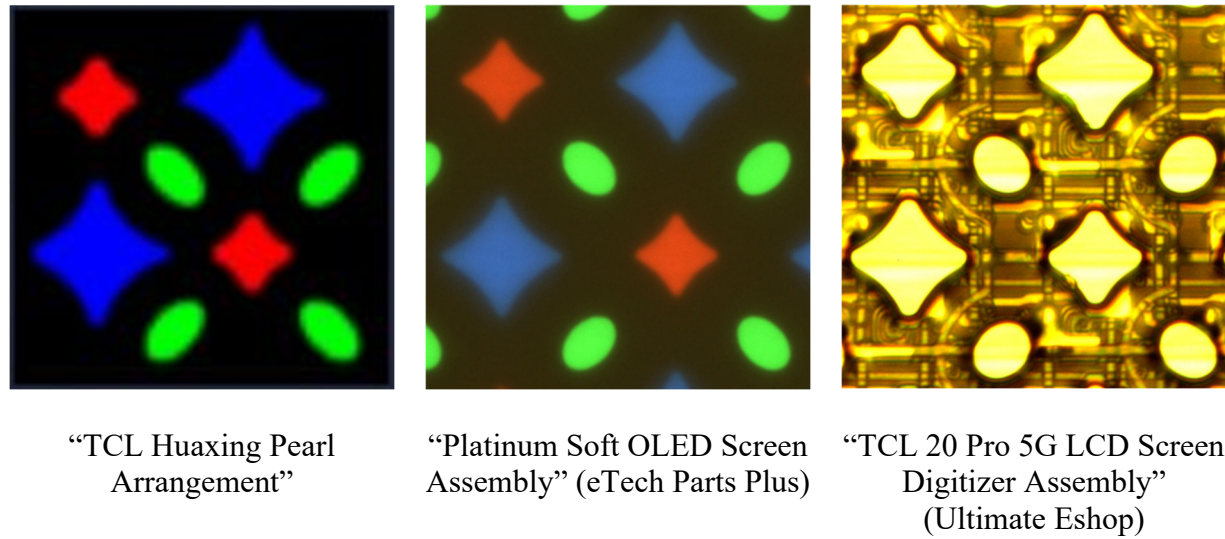
42. Upon information and belief, the “TCL 20 Pro 5G LCD Screen Digitizer Assembly” and “Platinum Soft OLED Screen Assembly” products include OLED displays manufactured by Defendant Wuhan CSOT. For example, Defendant TCL CSOT maintains a Weibo microblog page. *See* <https://m.weibo.cn/u/5724128001>. In a post dated October 15, 2020, TCL CSOT published an image showing a pixel arrangement it called the “TCL Huaxing Pearl Arrangement” (reproduced below). *See* <https://m.weibo.cn/detail/4560346666510480>; <https://wx4.sinaimg.cn/large/006fnRbbgy1gj5m7x6afj30zq0k3tc4.jpg>. On information and belief, Defendant Wuhan CSOT manufactures OLED displays using the “TCL Huaxing Pearl Arrangement.”

TCL 华星光电CSOT

	RGB排列	钻石排列	TCL华星珍珠排列	Delta排列	小黄鸭排列
排列示意					
真实分辨率	R 1:1 G 1:1 B 1:1	R 1/2:1 G 1:1 B 1/2:1	R 1/2:1 G 1:1 B 1/2:1	R 2/3:1 G 2/3:1 B 2/3:1	R 1/2:1 G 0.6:1 B 1/2:1
明度等效分辨率	1	0.795	0.795	0.667	0.6(0.5-0.795)
视觉等效分辨率	500ppi	398ppi	398ppi	333ppi	300ppi(250-398ppi)
	400ppi	318ppi	318ppi	267ppi	240ppi(200-318ppi)
	300ppi	239ppi	239ppi	200ppi	180ppi(150-239ppi)

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The “TCL 20 Pro 5G LCD Screen Digitizer Assembly” and “Platinum Soft OLED Screen Assembly” products are OLED displays that use the “TCL Huaxing Pearl Arrangement,” as shown below.



43. Upon information and belief, Defendants have induced infringement of the ’578 Patent under 35 U.S.C. § 271(b) by knowingly and intentionally inducing others to directly infringe the ’578 Patent. Despite having knowledge of the ’578 Patent, Defendants have actively

encouraged others to infringe the patent. For example, upon information and belief, Defendants have knowingly and intentionally induced third-party manufacturers, shippers, distributors, retailers, customers, and/or end-users to directly infringe (literally and/or under the doctrine of equivalents) the '578 Patent by importing into the United States, using, and/or selling and offering to sell in the United States the Accused Products and/or products containing the Accused Products. The Accused Products are specially designed to contain features that infringe the '578 Patent and the Accused Products have no substantial uses other than ones that infringe the '578 Patent. Moreover, upon information and belief, Defendants take active steps, directly and/or through contractual relationships with others, with the specific intent to cause such persons to import, use, sell, and/or or offer to sell the Accused Products and/or products containing the Accused Products that infringe at least claim 1 of the '578 Patent. Upon information and belief, such steps by Defendants include, among other things, making or selling the Accused Products for importation into or sale in the United States, knowing that such importation or sale would occur. Defendants have engaged in these activities with knowledge of the '578 Patent and knowledge that the induced acts constitute infringement. Defendants' inducement of infringement of the '578 Patent is ongoing.

44. Upon information and belief, Defendant Wuhan CSOT copied Samsung Display's OLED displays, which are protected by the Asserted Patents. Samsung Display marks the Asserted Patents on its website (<https://www.samsungdisplay.com/eng/patents.jsp>), and Defendants have had knowledge of the Asserted Patents through their copying of Samsung Display's patented OLED technologies. Defendant Wuhan CSOT also took steps to intervene in the -1351 Proceeding in which Samsung Display alleged infringement of the Asserted Patents, including the '578 Patent. On information and belief, Defendant Wuhan CSOT sought to intervene in the -1351 Proceeding

because it knew that OLED displays it makes and sells are alleged to infringe. Then, Wuhan CSOT filed an *inter partes* review petition challenging the validity of the '578 Patent—a challenge that was ultimately rejected by the Patent Trial and Appeal Board. Despite this, and upon information and belief, Defendant Wuhan CSOT continues to supply infringing OLED displays, including to Defendants Ultimate EShop and eTech Parts Plus. Defendant Wuhan CSOT also continues to supply infringing OLED displays into the U.S. market.

45. Upon information and belief, Defendants have also contributorily infringed the '578 Patent under 35 U.S.C. § 271(c) through their supply of the Accused Products to customers that incorporate the Accused Products into other products. The Accused Products have no substantial non-infringing uses and are especially designed and made for use in devices that infringe the '578 Patent. Defendants have engaged in these activities despite having notice of the '578 Patent, and the Accused Products that Defendants have sold and/or provided to customers embody a material part of the claimed invention of at least claim 1 of the '578 Patent. Defendants' contributory infringement of the '578 Patent is ongoing.

46. Defendants' infringement has been, and continues to be, willful. Upon information and belief, Defendant Wuhan CSOT copied Samsung Display's OLED displays, which are protected by the Asserted Patents. Samsung Display marks the Asserted Patents on its website (<https://www.samsungdisplay.com/eng/patents.jsp>), and Defendants have had knowledge of the Asserted Patents through their copying of Samsung Display's patented OLED technologies. Moreover, upon information and belief, Defendants TCL CSOT and its majority-owned subsidiary Wuhan China Star have had knowledge of the '578 Patent, and of their infringement of the patent, at least since the date of issuance of the '578 Patent. The '578 Patent issued from an application that was a continuation of applications that issued as the '803 Patent and the '683 Patent, which



were identified in Samsung Display's July 6, 2022 letter to Defendant TCL CSOT as being infringed by OLED displays being made and offered for sale by TCL CSOT. And on the same day that the '578 Patent issued, TCL CSOT notified Samsung Display of its intent to intervene in the -1351 Proceeding, where Samsung Display alleged infringement of the '803 Patent and the '683 Patent by certain Respondents that TCL CSOT believes sells in or imports into the United States replacement OLED displays manufactured by TCL CSOT. Moreover, upon information and belief, Defendants TCL CSOT and its majority-owned subsidiary Wuhan China Star have had knowledge of the '578 Patent, and of their infringement of the patent, at least since the filing of the public version of Samsung Display's motion to amend the complaint in the -1351 Proceeding to add allegations that the named Respondents infringe the '578 Patent, and further at least since the initial determination in the -1351 Proceeding finding infringement of the '578 Patent. Further, upon information and belief, Defendant eTech Parts Plus has had knowledge of the '578 Patent and of its infringement of that patent, at least as of the date Samsung Display moved to amend the complaint in the -1351 Proceeding to add allegations that the named Respondents, including Defendant eTech Parts Plus, infringe the '578 Patent. Further, upon information and belief, Defendants have further had knowledge of the '578 Patent, and of their infringement of the patent, at least since the filing of this Complaint. Yet Defendants have continued their infringing activities.

47. Samsung Display has been irreparably harmed by Defendants' infringement of the '578 Patent and will continue to be harmed unless and until Defendants' infringement is enjoined by this Court.

48. By its actions, Defendants have injured Samsung Display and are liable to Samsung Display for infringement of the '578 Patent pursuant to 35 U.S.C. § 271. Samsung Display is entitled to damages as set forth in at least 35 U.S.C. §§ 284 and 285.



**COUNT II – INFRINGEMENT OF U.S. PATENT NO. 7,414,599**

49. Samsung Display incorporates by reference the allegations of Paragraphs 1 through 48 as if fully set forth herein.

50. Upon information and belief, Defendants have infringed and continue to directly infringe the '599 Patent by making, using, selling, offering for sale in, and/or importing into the United States OLED displays for incorporation into the Accused Products.

51. Upon information and belief, Defendants have directly infringed multiple claims of the '599 Patent, including independent claim 15 by making, using, selling, offering for sale, and/or importing into the United States the Accused Products in violation of 35 U.S.C. § 271(a). Charts providing exemplary evidence of infringement of the '599 Patent are attached to this Complaint as Exhibits F and G. By way of example only, the “TCL 20 Pro 5G LCD Screen Digitizer Assembly” product infringes an exemplary claim of the '599 Patent, as shown in Exhibit F. Additionally, by way of example only, the “Platinum Soft OLED Screen Assembly” product infringes an exemplary claim of the '599 Patent, as shown in Exhibit G.

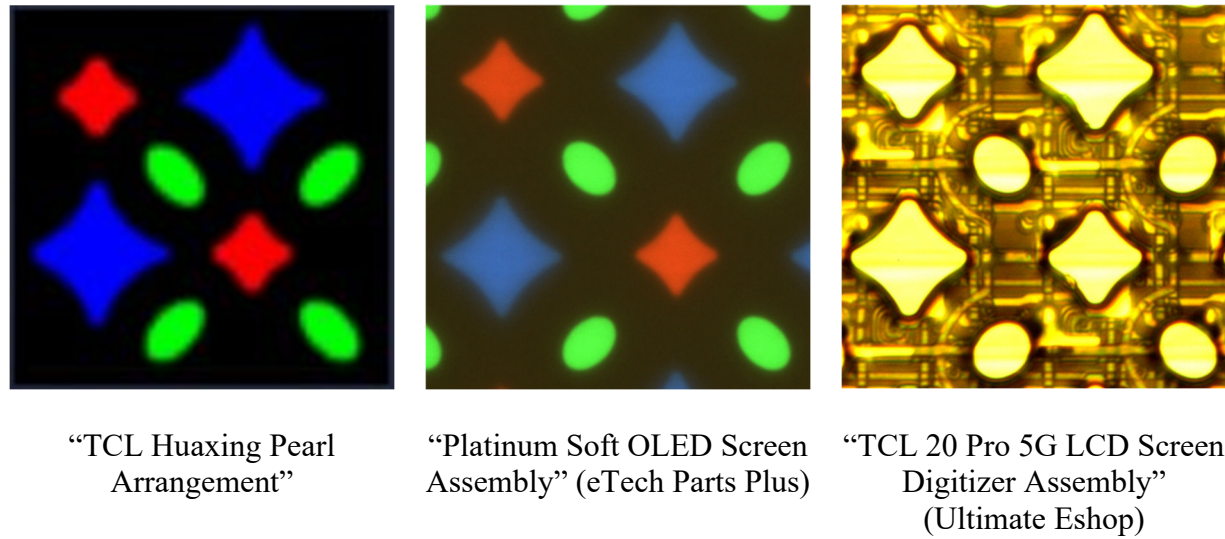
52. Upon information and belief, the “TCL 20 Pro 5G LCD Screen Digitizer Assembly” and “Platinum Soft OLED Screen Assembly” products include OLED displays manufactured by Defendant Wuhan CSOT. For example, Defendant TCL CSOT maintains a Weibo microblog page. *See* <https://m.weibo.cn/u/5724128001>. In a post dated October 15, 2020, TCL CSOT published an image showing a pixel arrangement it called the “TCL Huaxing Pearl Arrangement” (reproduced below). *See* <https://m.weibo.cn/detail/4560346666510480>; <https://wx4.sinaimg.cn/large/006fnRbbgy1gjQ5m7x6afj30zq0k3tc4.jpg>. On information and belief, Defendant Wuhan CSOT manufactures OLED displays using the “TCL Huaxing Pearl Arrangement.”

TCL 华星光电CSOT

	RGB排列	钻石排列	TCL华星珍珠排列	Delta排列	小黄鸭排列
排列示意					
真实分辨率	R 1:1 G 1:1 B 1:1	R 1/2:1 G 1:1 B 1/2:1	R 1/2:1 G 1:1 B 1/2:1	R 2/3:1 G 2/3:1 B 2/3:1	R 1/2:1 G 0.6:1 B 1/2:1
明度等效分辨率	1	0.795	0.795	0.667	0.6(0.5-0.795)
视觉等效分辨率	500ppi	398ppi	398ppi	333ppi	300ppi(250-398ppi)
	400ppi	318ppi	318ppi	267ppi	240ppi(200-318ppi)
	300ppi	239ppi	239ppi	200ppi	180ppi(150-239ppi)

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The “TCL 20 Pro 5G LCD Screen Digitizer Assembly” and “Platinum Soft OLED Screen Assembly” products are OLED displays that use the “TCL Huaxing Pearl Arrangement,” as shown below.



53. Upon information and belief, Defendants have induced infringement of the ’599 Patent under 35 U.S.C. § 271(b) by knowingly and intentionally inducing others to directly infringe the ’599 Patent. Despite having knowledge of the ’599 Patent, Defendants have actively

encouraged others to infringe the patent. For example, upon information and belief, Defendants have knowingly and intentionally induced third-party manufacturers, shippers, distributors, retailers, customers, and/or end-users to directly infringe (literally and/or under the doctrine of equivalents) the '599 Patent by importing into the United States, using, and/or selling and offering to sell in the United States the Accused Products and/or products containing the Accused Products. The Accused Products are specially designed to contain features that infringe the '599 Patent and the Accused Products have no substantial uses other than ones that infringe the '599 Patent. Moreover, upon information and belief, Defendants take active steps, directly and/or through contractual relationships with others, with the specific intent to cause such persons to import, use, sell, and/or or offer to sell the Accused Products and/or products containing the Accused Products that infringe at least claim 15 of the '599 Patent. Upon information and belief, such steps by Defendants include, among other things, making or selling the Accused Products for importation into or sale in the United States, knowing that such importation or sale would occur. Defendants have engaged in these activities with knowledge of the '599 Patent and knowledge that the induced acts constitute infringement. Defendants' inducement of infringement of the '599 Patent is ongoing.

54. Upon information and belief, Defendant Wuhan CSOT copied Samsung Display's OLED displays, which are protected by the Asserted Patents. Samsung Display marks the Asserted Patents on its website (<https://www.samsungdisplay.com/eng/patents.jsp>), and Defendants have had knowledge of the Asserted Patents through their copying of Samsung Display's patented OLED technologies. Defendant Wuhan CSOT also took steps to intervene in the -1351 Proceeding in which Samsung Display alleged infringement of the Asserted Patents, including the '599 Patent. On information and belief, Defendant Wuhan CSOT sought to intervene in the -1351 Proceeding

because it knew that OLED displays it makes and sells are alleged to infringe. Then, Wuhan CSOT filed an *inter partes* review petition challenging the validity of the '599 Patent—a challenge that was ultimately rejected by the Patent Trial and Appeal Board. Despite this, and upon information and belief, Defendant Wuhan CSOT continues to supply infringing OLED displays, including to Defendants Ultimate EShop and eTech Parts Plus. Defendant Wuhan CSOT also continues to supply infringing OLED displays into the U.S. market.

55. Upon information and belief, Defendants have also contributorily infringed the '599 Patent under 35 U.S.C. § 271(c) through their supply of the Accused Products to customers that incorporate the Accused Products into other products. The Accused Products have no substantial non-infringing uses and are especially designed and made for use in devices that infringe the '599 Patent. Defendants have engaged in these activities despite having notice of the '599 Patent, and the Accused Products that Defendants have sold and/or provided to customers embody a material part of the claimed invention of at least claim 15 of the '599 Patent. Defendants' contributory infringement of the '599 Patent is ongoing.

56. Defendants' infringement has been, and continues to be, willful. Upon information and belief, Defendant Wuhan CSOT copied Samsung Display's OLED displays, which are protected by the Asserted Patents. Samsung Display marks the Asserted Patents on its website (<https://www.samsungdisplay.com/eng/patents.jsp>), and Defendants have had knowledge of the Asserted Patents through their copying of Samsung Display's patented OLED technologies. Moreover, upon information and belief, Defendants TCL CSOT and its majority-owned subsidiary Wuhan China Star have had knowledge of the '599 Patent, and of their infringement of the patent, at least since TCL CSOT's receipt of Samsung Display's July 6, 2022 notice letter specifically informing TCL CSOT of its infringing activity, further at least since the filing of the complaint in

the -1351 Proceeding alleging infringement of the '599 Patent by certain Respondents that TCL CSOT believes sells in or imports into the United States replacement OLED displays manufactured by TCL CSOT, still further at least since the date TCL CSOT notified Samsung Display of its intent to intervene in the -1351 Proceeding, and further at least since the initial determination in the -1351 Proceeding finding infringement of the '599 Patent. Further, upon information and belief, Defendant eTech Parts Plus has had knowledge of the '599 Patent and of its infringement of that patent, at least since the filing of the complaint in the -1351 Proceeding, and at least as of the date it was served with that complaint. Further, upon information and belief, Defendants have further had knowledge of the '599 Patent, and of their infringement of the patent, at least since the filing of this Complaint. Yet Defendants have continued their infringing activities.

57. Samsung Display has been irreparably harmed by Defendants' infringement of the '599 Patent and will continue to be harmed unless and until Defendants' infringement is enjoined by this Court.

58. By its actions, Defendants have injured Samsung Display and are liable to Samsung Display for infringement of the '599 Patent pursuant to 35 U.S.C. § 271. Samsung Display is entitled to damages as set forth in at least 35 U.S.C. §§ 284 and 285.

**COUNT III – INFRINGEMENT OF U.S. PATENT NO. 9,330,593**

59. Samsung Display incorporates by reference the allegations of Paragraphs 1 through 58 as if fully set forth herein.

60. Upon information and belief, Defendants have infringed and continue to directly infringe the '593 Patent by making, using, selling, offering for sale in, and/or importing into the United States OLED displays for incorporation into the Accused Products.

61. Upon information and belief, Defendants have directly infringed multiple claims of the '593 Patent, including independent claim 1 by making, using, selling, offering for sale, and/or importing into the United States the Accused Products in violation of 35 U.S.C. § 271(a). Charts providing exemplary evidence of infringement of the '593 Patent are attached to this Complaint as Exhibits H and I. By way of example only, the "TCL 20 Pro 5G LCD Screen Digitizer Assembly" product infringes an exemplary claim of the '593 Patent, as shown in Exhibit H. Additionally, by way of example only, the "Platinum Soft OLED Screen Assembly" product infringes an exemplary claim of the '593 Patent, as shown in Exhibit I.

62. Upon information and belief, the "TCL 20 Pro 5G LCD Screen Digitizer Assembly" and "Platinum Soft OLED Screen Assembly" products include OLED displays manufactured by Defendant Wuhan CSOT. For example, Defendant TCL CSOT maintains a Weibo microblog page. *See* <https://m.weibo.cn/u/5724128001>. In a post dated October 15, 2020, TCL CSOT published an image showing a pixel arrangement it called the "TCL Huaxing Pearl Arrangement" (reproduced below). *See* <https://m.weibo.cn/detail/4560346666510480>; <https://wx4.sinaimg.cn/large/006fnRbbgy1gj5m7x6afj30zq0k3tc4.jpg>. On information and belief, Defendant Wuhan CSOT manufactures OLED displays using the "TCL Huaxing Pearl Arrangement."

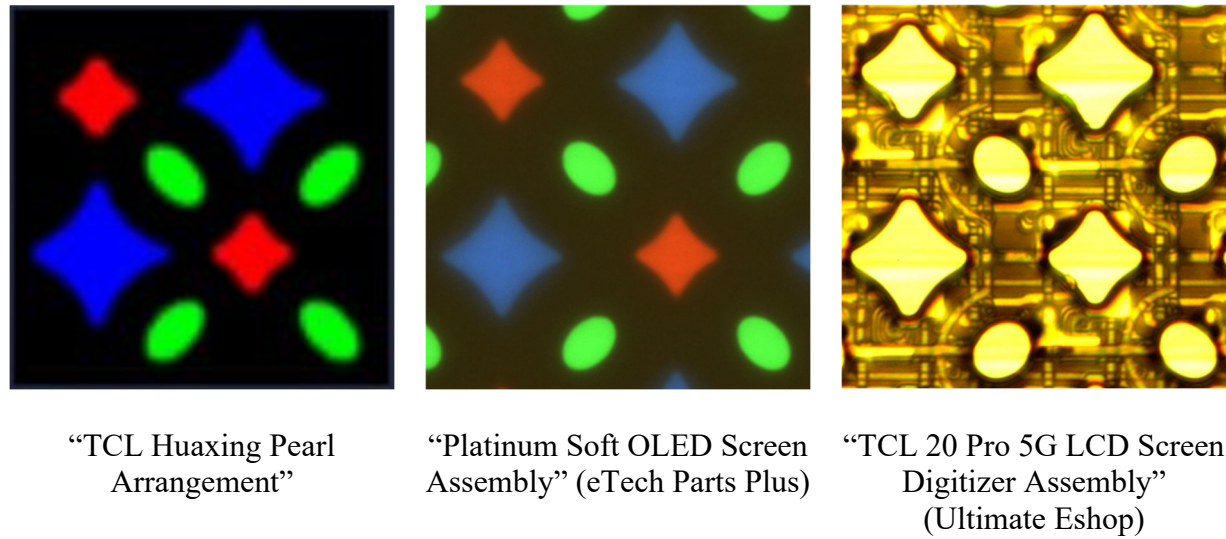


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	RGB排列	钻石排列	TCL华星珍珠排列	Delta排列	小黄鸭排列
排列示意					
真实分辨率	R 1:1 G 1:1 B 1:1	R 1/2:1 G 1:1 B 1/2:1	R 1/2:1 G 1:1 B 1/2:1	R 2/3:1 G 2/3:1 B 2/3:1	R 1/2:1 G 0.6:1 B 1/2:1
明度等效分辨率	1	0.795	0.795	0.667	0.6(0.5-0.795)
视觉等效分辨率	500ppi	398ppi	398ppi	333ppi	300ppi(250-398ppi)
	400ppi	318ppi	318ppi	267ppi	240ppi(200-318ppi)
	300ppi	239ppi	239ppi	200ppi	180ppi(150-239ppi)

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The “TCL 20 Pro 5G LCD Screen Digitizer Assembly” and “Platinum Soft OLED Screen Assembly” products are OLED displays that use the “TCL Huaxing Pearl Arrangement,” as shown below.



63. Upon information and belief, Defendants have induced infringement of the ’593 Patent under 35 U.S.C. § 271(b) by knowingly and intentionally inducing others to directly infringe the ’593 Patent. Despite having knowledge of the ’593 Patent, Defendants have actively

encouraged others to infringe the patent. For example, upon information and belief, Defendants have knowingly and intentionally induced third-party manufacturers, shippers, distributors, retailers, customers, and/or end-users to directly infringe (literally and/or under the doctrine of equivalents) the '593 Patent by importing into the United States, using, and/or selling and offering to sell in the United States the Accused Products and/or products containing the Accused Products. The Accused Products are specially designed to contain features that infringe the '593 Patent and the Accused Products have no substantial uses other than ones that infringe the '593 Patent. Moreover, upon information and belief, Defendants take active steps, directly and/or through contractual relationships with others, with the specific intent to cause such persons to import, use, sell, and/or or offer to sell the Accused Products and/or products containing the Accused Products that infringe at least claim 1 of the '593 Patent. Upon information and belief, such steps by Defendants include, among other things, making or selling the Accused Products for importation into or sale in the United States, knowing that such importation or sale would occur. Defendants have engaged in these activities with knowledge of the '593 Patent and knowledge that the induced acts constitute infringement. Defendants' inducement of infringement of the '593 Patent is ongoing.

64. Upon information and belief, Defendant Wuhan CSOT copied Samsung Display's OLED displays, which are protected by the Asserted Patents. Samsung Display marks the Asserted Patents on its website (<https://www.samsungdisplay.com/eng/patents.jsp>), and Defendants have had knowledge of the Asserted Patents through their copying of Samsung Display's patented OLED technologies. Defendant Wuhan CSOT also took steps to intervene in the -1351 Proceeding in which Samsung Display alleged infringement of the Asserted Patents, including the '593 Patent. On information and belief, Defendant Wuhan CSOT sought to intervene in the -1351 Proceeding



because it knew that OLED displays it makes and sells are alleged to infringe. Despite this, and upon information and belief, Defendant Wuhan CSOT continues to supply infringing OLED displays, including to Defendants Ultimate EShop and eTech Parts Plus. Defendant Wuhan CSOT also continues to supply infringing OLED displays into the U.S. market.

65. Upon information and belief, Defendants have also contributorily infringed the '593 Patent under 35 U.S.C. § 271(c) through their supply of the Accused Products to customers that incorporate the Accused Products into other products. The Accused Products have no substantial non-infringing uses and are especially designed and made for use in devices that infringe the '593 Patent. Defendants have engaged in these activities despite having notice of the '593 Patent, and the Accused Products that Defendants have sold and/or provided to customers embody a material part of the claimed invention of at least claim 1 of the '593 Patent. Defendants' contributory infringement of the '593 Patent is ongoing.

66. Defendants' infringement has been, and continues to be, willful. Upon information and belief, Defendant Wuhan CSOT copied Samsung Display's OLED displays, which are protected by the Asserted Patents. Samsung Display marks the Asserted Patents on its website (<https://www.samsungdisplay.com/eng/patents.jsp>), and Defendants have had knowledge of the Asserted Patents through their copying of Samsung Display's patented OLED technologies. Moreover, upon information and belief, Defendants TCL CSOT and its majority-owned subsidiary Wuhan China Star have had knowledge of the '593 Patent, and of their infringement of the patent, at least since TCL CSOT's receipt of Samsung Display's July 6, 2022 notice letter specifically informing TCL CSOT of its infringing activity, further at least since the filing of the complaint in the -1351 Proceeding alleging infringement of the '593 Patent by certain Respondents that TCL CSOT believes sells in or imports into the United States replacement OLED displays manufactured

by TCL CSOT, still further at least since the date TCL CSOT notified Samsung Display of its intent to intervene in the -1351 Proceeding, and further at least since the initial determination in the -1351 Proceeding finding infringement of the '593 Patent. Further, upon information and belief, Defendant eTech Parts Plus has had knowledge of the '593 Patent and of its infringement of that patent, at least since the filing of the complaint in the -1351 Proceeding, and at least as of the date it was served with that complaint. Further, upon information and belief, Defendants have further had knowledge of the '593 Patent, and of their infringement of the patent, at least since the filing of this Complaint. Yet Defendants have continued their infringing activities.

67. Samsung Display has been irreparably harmed by Defendants' infringement of the '593 Patent and will continue to be harmed unless and until Defendants' infringement is enjoined by this Court.

68. By its actions, Defendants have injured Samsung Display and are liable to Samsung Display for infringement of the '593 Patent pursuant to 35 U.S.C. § 271. Samsung Display is entitled to damages as set forth in at least 35 U.S.C. §§ 284 and 285.

### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff Samsung Display prays for relief as follows:

- A. A judgment that each of the Defendants has willfully infringed, directly and/or indirectly, each of the Asserted Patents;
- B. Compensatory damages in an amount commensurate with Defendants' infringement of the Asserted Patents, including without limitation lost profits and no less than a reasonable royalty;
- C. Permanent injunctive relief prohibiting Defendants from further acts of infringement of the Asserted Patents;
- D. Pre-judgment interest on all damages awarded to Plaintiff;

- E. Post-judgment interest on all sums awarded to Plaintiff from the date of the judgment;
- F. An award of treble damages pursuant to 35 U.S.C. § 284;
- G. An award of reasonable attorneys' fees pursuant to 35 U.S.C. § 285; and
- H. Any and all other relief that the Court deems just and equitable.

**DEMAND FOR JURY TRIAL**

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Samsung Display demands a trial by jury on all issues on which trial by jury is available under applicable law.

DATED: June 5, 2025

Respectfully submitted,

/s/ Timothy S. Durst

Timothy S. Durst

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